

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
18 September 2003 (18.09.2003)

PCT

(10) International Publication Number  
**WO 2003/076472 A3**

(51) International Patent Classification<sup>7</sup>: **C07K 16/30**,  
C12N 5/28, 15/08, G01N 33/574, 33/577, A61K 51/10,  
39/395, 47/48, A61P 35/00

(74) Agents: WEICKMANN, F., A. et al.; Weickmann & We-  
ickmann, Postfach 860 820, 81635 München (DE).

(21) International Application Number:  
PCT/IB2003/001335

(22) International Filing Date: 10 March 2003 (10.03.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
102 10 427.1 9 March 2002 (09.03.2002) DE

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU,  
AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU,  
CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH,  
GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC,  
LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW,  
MX, MZ, NI, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD,  
SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US,  
UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (GH, GM,  
KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),  
Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),  
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,  
ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO,  
SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM,  
GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(63) Related by continuation (CON) or continuation-in-part  
(CIP) to earlier application:  
US 102 10 427.1 (CIP)  
Filed on 8 March 2002 (08.03.2002)

Published:

- with international search report
- with (an) indication(s) in relation to deposited biological  
material furnished under Rule 13bis separately from the  
description

(71) Applicant (*for all designated States except US*):  
ONCOMAB GMBH [DE/DE]; c/o IGZ BioMed,  
Friedrich-Bergius-Ring 15, 97076 Würzburg (DE).

(72) Inventors; and

(75) Inventors/Applicants (*for US only*): VOLLMERS,  
Heinz, Peter [DE/DE]; Budapeststrasse 23, 97084  
Würzburg (DE). MUELLER-HERMELINK, Hans,  
Konrad [DE/DE]; Heinrich-Zeuner-Strasse, 97082  
Würzburg (DE).

(88) Date of publication of the international search report:  
25 March 2004

*For two-letter codes and other abbreviations, refer to the "Guid-  
ance Notes on Codes and Abbreviations" appearing at the begin-  
ning of each regular issue of the PCT Gazette.*

(54) Title: NEOPLASM SPECIFIC ANTIBODIES AND USES THEREOF

(57) Abstract: The present invention features polypeptides, such as antibodies, and their use in the treatment and diagnosis of neoplasms.

WO 2003/076472 A3

## INTERNATIONAL SEARCH REPORT

International , ition No  
PCT/IB 03/01335

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C07K16/30 C12N5/28 C12N15/08 G01N33/574 G01N33/577  
A61K51/10 A61K39/395 A61K47/48 A61P35/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C07K

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

BIOSIS, EPO-Internal, SEQUENCE SEARCH, WPI Data, PAJ, MEDLINE, EMBASE

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 01 83560 A (ICHIKAWA KIMIHISA ;KIMBERLY ROBERT P (US); KOOPMAN WILLIAM J (US);) 8 November 2001 (2001-11-08)  abstract page 1, line 25 - line 31 page 3, line 7 - line 9 page 4, line 25 - line 28 page 5, line 20 - line 30 page 5, line 22 - line 25 page 6, line 3 - line 5 page 6, line 25 - line 27 page 12, line 18 - line 31 page 20, line 1 - line 8 page 29, line 27 - line 28 page 30, line 17 - line 29 page 35, line 6 - line 11 page 36, line 15 - line 17 page 58, line 1 - line 2  -/--	1-6, 13, 14, 17-20, 26-53

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
- \*L\* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*Z\* document member of the same patent family

Date of the actual completion of the international search

3 November 2003

Date of mailing of the international search report

28/11/2003

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2  
NL - 2280 HV Rijswijk  
Tel (+31-70) 340-2040, Tx. 31 651 epo nl,  
Fax: (+31-70) 340-3016

Authorized officer

Irion, A

## INTERNATIONAL SEARCH REPORT

International Patent No.  
PCT/IB 03/01335

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	<p>WO 97 13844 A (CAMBRIDGE ANTIBODY TECH ;TEMPEST PHILIP RONALD (GB); THOMSON JULIA) 17 April 1997 (1997-04-17) figures 1,2,19 page 17, line 25 -page 18, line 21 page 1, line 8 - line 11 page 38, line 6 - line 9 page 38, line 16 - line 20 claims 1-34</p>	9,12-16, 21,22, 26,52,53
X	<p>WO 01 62932 A (AMGEN INC) 30 August 2001 (2001-08-30) claim 9</p>	23,26
X	<p>EP 1 106 183 A (GENENTECH INC ;REGENTS BOARD OF (US)) 13 June 2001 (2001-06-13)</p> <p>page 9, line 23 - line 30 page 17, line 15 - line 24 page 24, line 46 - line 55 page 5, line 5 - line 7 page 10, line 38 - line 44 page 14, line 26 - line 34</p>	3,6, 12-14, 16, 29-33, 36-41, 44-49, 52,53
X	<p>BRAENDLEIN STEPHANIE ET AL: "Characterization of five new fully human monoclonal IgM antibodies isolated from carcinoma patients" PROCEEDINGS OF THE AMERICAN ASSOCIATION FOR CANCER RESEARCH ANNUAL, vol. 43, March 2002 (2002-03), page 970 XP001155782 93rd Annual Meeting of the American Association for Cancer Research;San Francisco, California, USA; April 06-10, 2002, March, 2002 ISSN: 0197-016X the whole document</p>	1-53
X	<p>BRAENDLEIN STEPHANIE ET AL: "Human monoclonal IgM antibodies with apoptotic activity isolated from cancer patients." HUMAN ANTIBODIES, vol. 11, no. 4, 2002, pages 107-119, XP009020163 ISSN: 1093-2607 the whole document</p>	1-53

-/--

# INTERNATIONAL SEARCH REPORT

International Patent No.  
PCT/IB 03/01335

## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	MENG RAYMOND D ET AL: "p53-independent upregulation of KILLER/DR5 TRAIL receptor expression by glucocorticoids and interferon-gamma" EXPERIMENTAL CELL RESEARCH, vol. 262, no. 2, 15 January 2001 (2001-01-15), pages 154-169, XP002260126 ISSN: 0014-4827 the whole document	1-53
A	HUANG YING ET AL: "Sulindac sulfide-induced apoptosis involves death receptor 5 and the caspase 8-dependent pathway in human colon and prostate cancer cells" CANCER RESEARCH, vol. 61, no. 18, 15 September 2001 (2001-09-15), pages 6918-6924, XP002260127 ISSN: 0008-5472 the whole document	1-53

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/IB 03/01335

## Box I Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:  
  
Although claims 36-51 are directed to a method of treatment of the human/animal body, the search has been carried out and based on the alleged effects of the compound/composition.
2. ☐ Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

## Box II Observations where unity of invention is lacking (Continuation of Item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

# INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IB 03/01335

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
WO 0183560	A	08-11-2001	AU 5936601 A	12-11-2001
			CA 2407965 A1	08-11-2001
			CN 1440424 T	03-09-2003
			CZ 20023917 A3	14-05-2003
			EP 1287035 A1	05-03-2003
			NO 20025253 A	18-12-2002
			WO 0183560 A1	08-11-2001
-----				
WO 9713844	A	17-04-1997	AT 190650 T	15-04-2000
			AT 199091 T	15-02-2001
			AU 702049 B2	11-02-1999
			AU 7140596 A	30-04-1997
			CA 2233042 A1	17-04-1997
			DE 69607191 D1	20-04-2000
			DE 69607191 T2	28-09-2000
			DE 69611766 D1	15-03-2001
			DE 69611766 T2	02-08-2001
			DK 945464 T3	07-05-2001
			EP 0853661 A1	22-07-1998
			EP 0945464 A1	29-09-1999
			ES 2146020 T3	16-07-2000
			ES 2156035 T3	01-06-2001
			WO 9713844 A1	17-04-1997
			GB 2305921 A , B	23-04-1997
			GR 3033436 T3	29-09-2000
			GR 3035775 T3	31-07-2001
			JP 2000500643 T	25-01-2000
			PT 853661 T	31-08-2000
			PT 945464 T	31-07-2001
-----				
WO 0162932	A	30-08-2001	US 2003103978 A1	05-06-2003
			AU 3868001 A	03-09-2001
			CA 2400929 A1	30-08-2001
			EP 1257648 A1	20-11-2002
			JP 2003523772 T	12-08-2003
			WO 0162932 A1	30-08-2001
-----				
EP 1106183	A	13-06-2001	EP 1106183 A2	13-06-2001
			AU 4982097 A	15-05-1998
			BR 9712410 A	19-10-1999
			CN 1234072 A	03-11-1999
			EP 0931147 A1	28-07-1999
			JP 2001504326 T	03-04-2001
			JP 2001302540 A	31-10-2001
			KR 2000049261 A	25-07-2000
			TR 9901615 T2	22-11-1999
			WO 9817797 A1	30-04-1998
			ZA 9709185 A	14-04-1999
-----				